CLAIMS

What is claimed is:

1. A method comprising:

determining a dry etch rate of a sacrificial, light absorbing material (SLAM) and of an interlayer dielectric (ILD) material;

comparing the dry etch rate of the ILD material with the dry etch rate of the SLAM;

altering the composition of the SLAM to provide a changed dry etch rate for the SLAM such that the dry etch rate of the altered SLAM is approximately equal to the dry etch rate of the ILD material.

2. The method defined by claim 1, wherein altering the composition of the SLAM increases its dry etch rate.

3. The method defined by claim 1, wherein altering the composition of the SLAM decreases its dry etch rate.

4. The method defined by claim 1, wherein the SLAM comprises a polymer-based material.

5. The method defined by claim 1, wherein the SLAM comprises a silicon-based material.

6. The method defined by claim 4, wherein the altering of the SLAM comprises the introduction of a halogen into the SLAM.

7. The method defined by claim 6, wherein the halogen is fluorine.

8. The method defined by claim 4, wherein the altering of the SLAM altering a carbon-to-silicon ratio in the SLAM.

9. The method defined by claim 4, wherein the altering of the SLAM comprises introducing carbon in a cyclic, aromatic or cage form into the SLAM.

10. The method defined by claim 5, wherein the altering of the SLAM comprises the introduction of a halogen into the SLAM.

11. The method defined by claim 5, wherein the altering of the SLAM comprises introducing carbon in a cyclic, aromatic or cage form into the SLAM.

12. The method of claim 10, wherein the halogen is fluorine.

13. A method comprising:

selecting a sacrificial, light absorbing material (SLAM) for use with a dielectric material in a damascene process;

comparing a dry etch rate of the SLAM with a dry etch rate of the dielectric material when both are etched at the same time;

determining whether the etch rate of the SLAM needs to be increased or decreased to match the etch rate of the dielectric material;

altering the composition of the SLAM to increase or decrease its etch rate such that the etch rate of the altered SLAM matches the etch rate of the dielectric material.

14. The method defined by claim 13, wherein the dielectric material is a carbon doped oxide.

15. The method defined by claim 14, wherein the SLAM is a polymer-based material.

16. The method defined by claim 15, wherein the carbon to silicon ratio of the SLAM is changed to alter the composition of the SLAM.

17. The method defined by claim 15, wherein a halogen is added to or removed from the SLAM to increase or decrease its etch rate so that it matches the etch rate of the dielectric material.

18. The method of claim 17, wherein the halogen is fluorine.

19. The method defined by claim 15, wherein carbon in a cyclic, aromatic, or cage form is added to or removed from the SLAM to decrease or increase its etch rate so that it matches the etch rate of the dielectric material.

20. The method defined by claim 19, wherein the SLAM is a siloxane based material.

21. The method defined by claim 20, wherein the etch rate of the SLAM is increased or decreased by adding fluorine or removing fluorine from the SLAM to match the SLAM's etch rate to that of the dielectric material.

22. The method defined by claim 20, wherein carbon in a cyclic, aromatic, or cage form is added to or removed from the SLAM to decrease

or increase its etch rate so that it matches the etch rate of the dielectric material.

23. A method comprising:

altering the composition of a SLAM to provide a changed dry etch rate for the SLAM such that the changed etch rate of the altered SLAM is approximately equal to a dry etch rate of an interlayer dielectric (ILD) material;

forming a via opening in a layer fabricated from the ILD material;

filling the via opening with the altered SLAM; and

etching a trench approximately centered on the via opening such that the ILD material and the SLAM etch at the same rate.

24. The method defined by claim 23, wherein the ILD material is a carbon doped oxide.

25. The method defined by claim 23, wherein the ILD material is a polymer based material.